

# CYGON<sup>R</sup> 2E DIMETHOATE SYSTEMIC INSECTICIDE

## MATERIAL SAFETY DATA SHEET

**Manufacturer's Name & Address**

Southern Agricultural Insecticides, Inc.  
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**I. PRODUCT NAME**

CYGON 2E DIMETHOATE SYSTEMIC INSECTICIDE EPA Reg.No.829-251

Chemical Name: O,O-dimethyl- S-(N-methylcarbamoyl-methyl) phosphorodithioate

Synonyms: Cygon, Dimethoate,

Chemical Family: Organophosphate insecticide

**II. HAZARDOUS INGREDIENTS**

	nominal %	CAS #	(ACGIH)TWA	OSHA PEL (sub part Z)
(1) Dimethoate	24.4%	60-51-5	N/A	N/A
(2) Cyclohexanone	36.1%	108-94-1	25 ppm (skin)	50 ppm
(3) Trimethylbenzene	17.2%	25551-13-7	25 ppm	Removed
(4) Ethyltoluenes	7.0%	25550-14-5	25ppm	N/A
(5) 1,3 Dimethylbenzene	2.9%	108-38-3	100ppm	100ppm
(6) Xylenes	1.1%	1330-20-7	100ppm	100ppm

Hazardous ingredients listed in excess of 1%, Carcinogens in excess of 0.1% as per CFR 29 1910-1200

Ingredients listed as Carcinogen IARC, NTP, OSHA NONE

**III HEALTH HAZARD DATA** (Acute and Chronic)

Data given for technical Dimethoate

Oral LD50 (Rat) 387 mg/kg Dermal LD50 (rat) &gt;2000 mg/kg

Inhalation LC50 (rat) 1.6 mg/1/4-h (estimated value)

Product Signal word: WARNING

Primary Routs of entry: Ingestion, skin absorption, eye contact.

Irritancy Of Dimethoate: Very slight transient dermal irritation. Slight eye irritant.

Skin Sensitization: Dimethoate is not considered to be a skin sensitizer.

Medical conditions aggravated by exposure: Preexisting eye, skin, respiratory disorders and prior experience with lowered cholinesterase level..

Signs and symptoms: Headaches, nausea, vomiting, cramps, weakness, blurred vision, pin point pupils, tightness in chest, labored breathing, nervousness, sweating, watering of eyes, drooling or frothing of mouth and nose, muscle spasms and coma.

Reproductive Effects: A reduction of successful matings are observed in rats at doses where cholinesterase effects were observed.

Teratology: No embryotoxic or teratogenic effects are observed in rats and rabbits, even at maternal toxic doses.

Mutagenicity: No mutagenic effects observed in invivo tests.

**IV FIRST AID:**

In all cases of suspected poisoning: Call a physician or poison control center immediately: Follow first aid instructions. Remove patient from exposure area. Keep patient quiet

IF SWALLOWED: Call a physician or poison control center immediately: Gastric lavage is usually indicated. Do not induce vomiting. Vomiting may cause aspiration pneumonia. Do not induce vomiting or give anything by mouth to an unconscious person. Keep exposed person quiet

IF INHALED: Remove victim to fresh air. Assist respiration if indicated. If breathing has stopped, start artificial respiration immediately, and continue until physician takes charge

IF ON SKIN; Promptly wash contaminated skin with soap and water. If material gets on or inside protective clothing remove protective clothing and wash exposed skin with soap and water. Do not wear contaminated clothing.

IF IN EYES: Immediately flush eyes with plenty of water. Hold lids open while flushing for at least 15 minutes. Get medical attention;

NOTE TO PHYSICIAN: Dimethoate is a cholinesterase inhibitor affecting the central and peripheral nervous systems and producing cardiac and respiratory depression. Antidote: Administer atropine sulfate in large doses. TWO to FOUR mg intravenously or intramuscularly as soon as cyanosis is overcome. Repeat at 5-10 minute intervals until signs of atropinization appear. 2-PAM chloride is a pharmacological antidote and may be administered as an adjunct but not a substitute for atropine. DO NOT GIVE MORPHINE OR TRANQUILIZERS. At first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Continued absorption of DIMETHOATE may occur and relapse may occur after initial improvement. VERY CLOSE SUPERVISION OF PATIENT IS INDICATED FOR AT LEAST 48 hours.

**V PHYSICAL PROPERTIES**

Boiling Point: &gt; 200° F

Specific Gravity: 1.01

Percent Volatile: (by volume)&gt;50%

Vapor Density: (air=1) &gt;3

Evaporation Rate: not determined

Solubility In Water: emulsifies in water.

Appearance/Odor: Clear colorless to light-yellow liquid; slight mercaptan odor

**VI FIRE AND EXPLOSION DATA**

Flash Point: 100 °F(Min)

Flammable Limits: not available

Extinguishing Media: CO<sub>2</sub>, dry chemical, foam. Water spray may be used to cool containers. A water stream may spread flames.

Special Fire Fighting Procedures: Flammable liquid. Fight fire upwind. Evacuate people downwind. Vapors readily form explosive mixtures with air. Heavier than air vapors can travel to distant ignition sources and flashback. Fire fighters should wear full face self contained breathing equipment and impervious clothing gloves, hoods, suits, and rubber boots. Decontaminate clothing and equipment before reuse. Control water runoff.

Unusual Fire & Explosion Hazards: Keep away from heat, sources of ignition, and oxidizers. Hot containers may explode, use water to keep containers cool.

**VII Reactivity:**

Stability: X Stable under normal storage conditions. Conditions to avoid: Heat, flame, sparks, build up of static electricity and storage temperatures above 80°F. Materials to Avoid: Oxidizers, strong alkalis, amines, Hazardous Decomposition Products: Dimethyl sulfide, methyl mercaptan, carbon monoxide, and unidentified carbon compounds. Hazardous Polymerization: Not expected, However technical dimethoate undergoes exothermic and autocatalytic reactions which involve rearrangements and polymerization.

**VIII SPILL OR LEAK PROTECTION**

Steps To Be Taken If Spilled: Personnel involved with clean up should be equipped with proper protective equipment. See Section IX. Dike and soak up spilled material with absorbent material such as lime, sawdust, or vermiculite. Sweep up recovered material and place in appropriate chemical waste container. Wash spill area with liquid chlorine bleach or caustic soda solution. Flush spill area with water to remove residue.

**IX SPECIAL PROTECTION**

For Agricultural Use Requirements refer to label and Worker Protection Standard (WPS) 40 CFR part 170

Respiratory: For exposure in enclosed area use a respirator with either an organic vapor removing cartridge with an organic vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH TC-23C) or a canister approved for pesticides (MSHA/NIOSH TC-14G. For outdoor use a dust/mist filtering respirator (MSHA/NIOSH TC21

Ventilation: Local Exhaust is recommended for indoor use Gloves: Barrier laminate, or viton.

Eye Protection: Yes safety glasses with side shields or goggles.

Other Protective Equipment: Coveralls over short sleeved shirt and pants. Chemical resistant footwear plus socks Chemical resistant headgear for overhead exposure. Chemical resistant apron for cleaning equipment, mixing and loading. Remove clothing immediately if pesticide gets inside and/or after using, wash thoroughly and change to clean clothing. Launder contaminated clothing separately from household wash.

**X SPECIAL PRECAUTIONS**

Handling Precautions: Keep out of reach of children. Do not allow spray drift to unprotected persons. Do not allow contact with sprayed surfaces until sprayed surfaces have dried.

Storing Precautions: Handle cases so as to avoid breakage. Do not store open, leaking, or broken containers. Store as a combustible pesticide in cool, dry, well ventilated area away from ignition sources. Store below 80°F Do not store with feed or foodstuffs. If product has frozen, allow product to return to room temperature and shake if necessary. Do not apply direct heat to containers.

**XI ECOLOGICAL INFORMATION**

Dimethoate is biodegradable, undergoing rapid degradation in the environment. It is toxic to wildlife and aquatic invertebrates. Acute toxicities for Dimethoate: Fish; 96-h LC50 Rainbow trout *Salmo gairdneri* 30.2 ppm

Invertebrates, 48-h LC50 Daphids *Daphnia magna* 4.7 ppm

Birds, LD50 ,acute oral, Mallard Duck (M) 41.7 mg/kg

Bees, 24-h LD50 topical, 0.12 ug/bee

24-h LD50 oral 0.15 ug/bee

**XII WASTE DISPOSAL** Dispose of in an approved waste facility or in accord with local, State, and Federal regulations.

Container Disposal: 8 oz., 16 oz., 32 oz. containers from household use. Rinse thoroughly and discard in trash

Pesticide disposal: 8 oz., 16 oz., 32 oz. containers from household use. Securely wrap original container in several layers of newspaper and discard in trash.

Container disposal, except household, Triple rinse, or equivalent, then offer for recycling or puncture and dispose of in sanitary landfill, or incinerate, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**XIII REGULATORY INFORMATION** (Not meant to be all-inclusive--Selected regulations referenced)

TRANSPORTATION: Proper shipping name: Organophosphorus Pesticide, Liquid, Toxic, Flammable, n.o.s. (Dimethoate/Petroleum naphtha) 6.1 (3) UN3017 PG III Marine Pollutant ERG guide #28 Cases of 2x2 1/2 gal and larger sizes require "RQ"

Note :8 oz., pint, and quarts are classified as Consumer Commodity ORM-D .

REGULATORY: OSHA: This product is a "Hazardous Chemical" as defined by the OSHA COMMUNICATION STANDARD< 29 CFR-1910.1200.

Dimethoate is listed as an EHS 40 CFR part 355 RQ 10 pounds, TPQ 500/10000 pounds

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of section 313.

Xylenes (mixed isomers) CAS # 1330-20-7, m, xylene CAS # 108-38-3,

HAZARD CATEGORIES SARA TITLE III sections 311 & 312: An Immediate Health Hazard, A Delayed Health Hazard, A Fire Hazard

This information relates solely to the designated product and is not inclusive for combinations with other materials. This information is given without warranty or representation. Information is based on data we believe to be correct as of the date hereof. This information is furnished solely for your consideration, investigation, and verification. Before using any product READ THE LABEL.

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